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Requirement Specification:

The hospital simulator program will stimulate an emergency room. The program is dependent on the user input, and it runs different scenarios due to the users input. When a patient arrives they will be served according to their level of illness. The priority ranges between if it is an illness that occurs frequently or if it is a severe illness. There are 2 types of caregivers either Doctors or Nurses, and they are assigned to treat the patients with the priority matching the level of illness while considering the time. The hospital keeps a record of every patient that has visited the emergency room, how many times they visited with the severity of illness linked to each visit. The use is asked to input the average rate of patients coming in, the number of doctors and nurses working in the ER. At the end of the simulation the program will calculate the average patient arrival at the ER, and it will have a display menu with options to list the names of the residents treated, and retrieve the record of a resident by name.

Use cases:

Program: prompts the user for the number of patients per hour

User: inputs number of patients

If the user inputs out of range the program throws exception

Program: prompts the user input number of doctors

User: inputs number of doctor

If out of range the program throws exception

Program: prompts the user to input numbers of nurses

User: inputs number of doctors

If out of range the program throws the exception

Program: displays the menu and prompts the user to choose from the menu

User: selects what it wants

Program: displays the patient’s choice and shows the menu again

User: selects from the menu

Or exits Program ends

DischarheRoom

If the doctors queue is not empty, then it would point to the first patient in line and it would setDischargeTime to clock. Once the patient leaves the patient is removed and tthe